

II. SUPPLY, DEMAND AND NEED FOR OUTDOOR RECREATION

INTRODUCTION

The supply, demand, and need for outdoor recreation opportunities is basic information for managers of federal, state and local recreation agencies as well as private recreation ventures. Determining the adequacy of existing resources and the need for new resources should take into account the number and type of recreation facilities currently provided, the number of people who live in the market area, and public preferences.

From a statewide perspective, it is desirable for all residents to have access to high quality recreational opportunities. Thus, counties that have fewer recreation resources per capita should be given some preference over counties with more resources when the counties compete for statewide funding. This chapter provides information to rank North Carolina counties according to the availability of recreational resources on a per capita basis.

Publicly funded recreational opportunities should reflect public preferences. These preferences can be determined through surveys, public meetings, or reactions to draft plans. This chapter contains the results of a random, statewide survey that measured what recreational activities North Carolinians are choosing as well as what citizens want in the future. The chapter also contains a summary of the 2000 National Survey on Recreation and the Environment. Specifically, this chapter presents the following information.

1. **The supply of outdoor recreation opportunities:** Statewide survey results indicate the number of park acres and outdoor recreational facilities in North Carolina provided by municipal, county, state, and federal agencies as well as some commercially provided facilities.
2. **A comparison of counties based on existing recreational opportunities and county population:** North Carolina counties are ranked according to the park acres and recreational facilities available in each county and the county's population.
3. **Recreation participation rates:** Survey results present how frequently North Carolina households participate in a various outdoor recreation activities.
4. **Priorities for publicly funded outdoor recreation:** Results from a public preference survey forecasts the recreational activities that public agencies should provide in the future by ranking the activities according to future demand and support for public funding.

SUPPLY OF OUTDOOR RECREATIONAL OPPORTUNITIES

The Outdoor Recreation Spectrum

Outdoor recreation encompasses a great variety of outdoor recreational activities because people look for many different types of experiences. The desire for different experiences causes people to choose between solitude or crowds, natural surroundings or man-made facilities, and physically challenging or relaxing activities. Table II-1 summarizes the outdoor recreational spectrum by presenting its opposite ends. Urban and modern settings, activities, and experiences are contrasted with the primitive and remote end of the spectrum. These distinctions are based on the Outdoor Recreation Opportunity Spectrum developed by the U.S. Forest Service as a framework for describing outdoor recreation in terms of experience, activities, and settings.

The spectrum, or range of resources, corresponds roughly to providers. The Federal government supplies a large amount of the undeveloped land and water used for outdoor recreation in North Carolina. At the other end of the spectrum, local governments and the private sector provide the bulk of highly developed recreation resources. In North Carolina, state-owned outdoor recreation lands are generally more resource based than most southeastern states.

Natural resources and man-made facilities provide the settings usually needed for outdoor recreation. As described in the outdoor recreation spectrum, natural resources vary from settings like ocean beaches and scenic mountain vistas to urban open space. A description of the Statewide Comprehensive Outdoor Recreation Plan (SCORP) park and recreation area classes is presented in Table II-2.

As much as any trait, North Carolina's outdoor recreation resources can be characterized by their diversity. One common characteristic these recreation resources share is their dependence on land and water resources. Any land or water resource that is used to produce satisfying leisure experience is a recreation resource.

Outdoor recreation activities can be divided into those that depend primarily on a man-made facility and those that depend primarily on a natural resource (Table II-3). The facility-dependent activities, such as tennis courts, can be placed at many locations and still provide a similar experience. Resource-dependent activities, such as sailboating, must be located where suitable natural resources are available. For each activity, the appropriate facility has been identified.

Table II-1. The Spectrum of Outdoor Recreation Activities¹

	MODERN/URBAN	PRIMITIVE/REMOTE
SETTINGS:		
PROXIMITY	close to home	far from home
SIZE	less than 100 acres	several thousand acres
FACILITIES	extensive facilities	limited or no facilities
NATURAL RESOURCES	man-made environment dominates; natural resources secondary.	natural environment dominant; little/no development.
ACTIVITIES:	facility dependent	natural resource dependent
EXPERIENCES:		
LEISURE TIME	Participation in short time periods possible.	Substantial blocks of time required for participation.
MANAGEMENT CONTROLS	Regimentation and controls obvious and numerous.	On-site regimentation low, with controls primarily off-site.
SOCIAL INTERACTION	Large numbers of users on-site and in nearby areas.	Few people encountered per day.
CHARACTER OF EXPERIENCE	Opportunities for competitive and spectator sports and for passive uses of highly developed parks are common; experiencing natural environment-related challenges and risks and using outdoor skills are relatively unimportant; contact with other people is prevalent, as is convenience of sites and opportunities.	High probability of experiencing isolation from sights and sounds of humans; independence; closeness to nature; tranquility and self-reliance through the application of primitive outdoor skills in an environment that offers challenge and risk.

¹ Sources: *R. O. S. Users Guide*, U.S. Forest Service, Department of Agriculture, 1982, Washington, D.C.
Recreation, Park and Open Space Standards and Guidelines, National Recreation and Park Association, 1983, Alexandria, Virginia.

Table II-2. SCORP Park and Recreation Area Class Names and Descriptions

AREA NAME	DESCRIPTION
Neighborhood Park	Area for intensive recreation such as field and court games, playground equipment, picnicking and wading pools. 6-8 acres is a typical size. Examples include mini-parks serving residential areas, playgrounds, sports field complexes and combination playgrounds/sports fields/passive natural areas.
Community Park	Area providing a wide array of active recreational opportunities including a recreation center building, fields, hard surface courts, and picnicking. Natural or landscaped areas are provided for passive recreation. May include a swimming pool or be in conjunction with a school. 10-20 acres is a typical size. Examples include large park/school complexes; recreation center/ pool/sports field and court complexes; and community center/park complexes.
District/Metro Area Park	Area serving one or more suburban or rural communities. Similar to the Community Park, these areas offer intensive recreation activities and natural environment areas. Typical size is 20-100 acres. Examples include intensively developed county parks, developed public recreation sites at large reservoirs, and state recreation areas.
Local Parks	Combines Neighborhood, Community, and District/Metro Area parks classes described above.
Regional/State Parks	Area of natural quality for natural resource-based outdoor recreation. Generally, 80% of the land is reserved for conservation and natural resource management with less than 20% developed for recreation. Typical size is 3,000-5,000 acres. Examples include state parks, state recreation areas, state natural areas, educational state forests and large natural resource-based county parks. Activities include nature study, picnicking, camping, fishing, boating, swimming, and various trail uses.
Dispersed Use/ Conservancy Area	Area for protection and management of the natural environment with recreation use as a secondary objective. Certain multiple use management approaches produce natural resource outputs such as timber, agricultural produce and minerals. Examples include state gamelands, multiple use areas of national and state forests, reservoir shoreline buffer lands, and Blue Ridge Parkway acreage. Typical size should be sufficient to protect and manage the primary resource while providing secondary recreational uses.
Wilderness Area	Area characterized by unmodified natural environment of fairly large size. Low interaction between users, and evidence of others is minimal. Motorized use is not permitted. Typical size is 5,000-15,000 acres. Examples are congressionally designated National Wilderness Areas.
Historic/Cultural Area	Area that preserves, maintains, and interprets buildings and places of archaeological, historical, or cultural significance. Should be of sufficient size to protect and interpret the resource while providing optimum use. Examples include local, state, and national historic sites.

Table II-3. Outdoor Recreation Activities and Related Facilities

FACILITY-DEPENDENT ACTIVITIES		NATURAL RESOURCE-DEPENDENT ACTIVITIES	
ACTIVITY	FACILITY	ACTIVITY	FACILITY
Baseball	Fields	Bicycle Touring	Rural Highways
Basketball	Courts	Camping, Tent	Sites
Bicycling	Urban Bikeways	Camping, Trailer	Sites
Football	Fields	Canoeing	Stream Access
Golf	Courses	Hiking	Trails
Playground Use	Tot Lots	Horseback Riding	Trails
Soccer	Fields	Nature Study	Interpretive Trails/ Natural Areas
Softball	Fields	Swimming, Non-pool	Designated Beaches
Swimming, Pool	Pools	Mountain Biking	Trails
Tennis	Courts		
Volleyball	Courts		
In-line Skating	Paved trails/sidewalks		

An inventory of public recreation sites has been performed to measure the supply of the recreational resources in each county. The inventory used the area and facility classifications discussed previously to count the parks and facilities at public recreation sites in North Carolina. For example, the supply of tennis courts in a county is simply the total number of tennis courts found in all public parks. Park acreages have been classified according to the type of park areas and totaled for each county. The statewide summary for the park acreage inventory is presented in Table II-4, and the summary of recreational facilities is shown in Table II-5. County totals for both park acreages and some facilities are included in Appendix A. Approximately 8.5 percent of the state is recreational acreage. Most of this acreage is composed of state gamelands and federally owned forests and parklands.

Table II-4. Outdoor Recreation Acreage by Operator and Site Classification

SITE CLASSIFICATION	OPERATOR CLASSIFICATION				Total
	FEDERAL	STATE	MUNICIPAL	COUNTY	
Local	0	0	39,189	20,666	59,855
Regional Reserve	3,754	175,920	6481	10,803	196,958
Dispersed Use	2,040,783	362,096	0	0	2,402,879
Totals:	2,044,537	538,016	45,670	31,469	2,659,692

Table II-5. Statewide Totals for Outdoor Recreation Facilities by Operator Class

ACTIVITY	FACILITY	OPERATOR CLASS				TOTAL
		FEDERAL	STATE	MUNICIPAL	COUNTY	
Basketball	Courts	3	1	671	227	902
Football	Fields	0	0	99	68	167
Soccer	Fields	0	0	452	270	722
Football/ Soccer	Fields	0	0	130	131	261
Softball	Fields	0	1	452	275	728
Baseball	Fields	0	0	662	310	972
Baseball/ Softball	Fields	0	0	272	194	466
Playground Use	Playground	7	8	987	277	1,279
Swimming	Pools	0	1	120	28	149
Tennis	Courts	0	0	1,551	595	2,146
Picnicking	Shelter	7	94	837	357	1,295
Trails (All types)	Miles	1,970.2	377.9	635.4	251.1	3,234.6
Volleyball	Courts	0	0	149	103	252

COMPARING COUNTIES BASED ON RECREATION RESOURCES AND POPULATION

In SCORP documents prior to 1995, standards were used to describe adequate quantity of public recreational acreage and facilities based on population. Since 1995, the SCORP no longer recommends using standards based on population (such as one tennis court per 2,000 people) to express recreation needs in North Carolina, a position supported by the National Recreation and Park Association. These standards take a cookie-cutter approach that recommends the same services for all counties when in fact each county and community has unique characteristics and preferences. Some of these differences include population density and diversity, roads and transportation, geography, natural resources, state and federal land ownership, and amounts of tourism. No single standard can be accurately applied to all of North Carolina because the state includes areas as diverse as the Charlotte metropolitan area, remote areas of the Appalachian Mountains, large rural areas in the Coastal Plain, and wide beaches of the North Carolina coast. Recreation needs should be determined by the preferences of the people in the market area, the existing recreation resources, levels of tourism, and the characteristics that make the area unique.

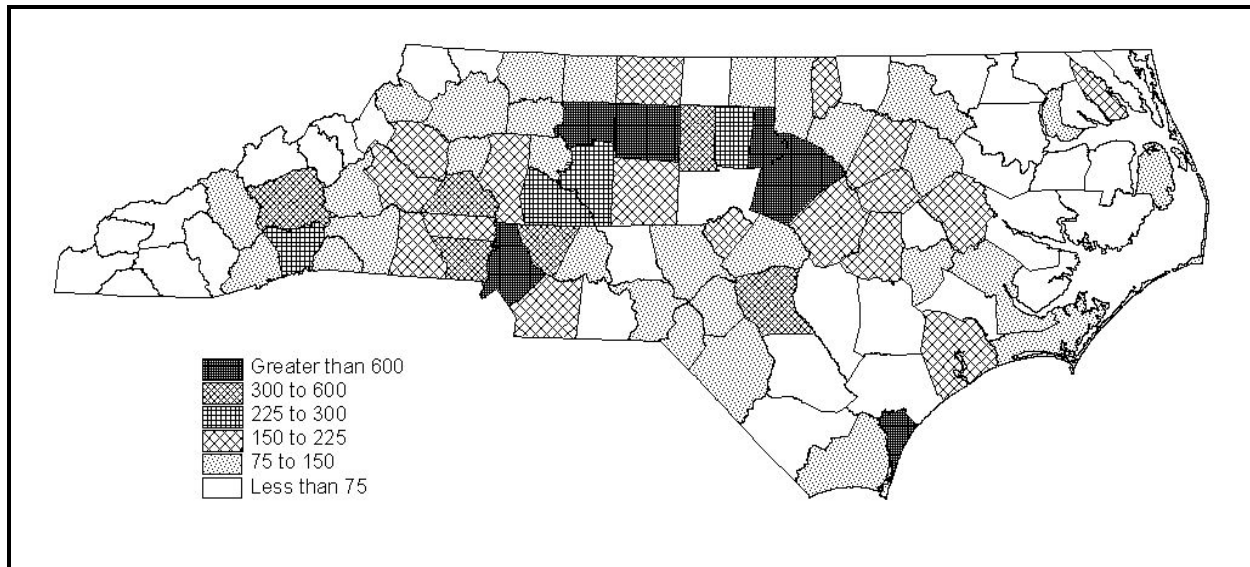
Instead of prescribing an appropriate level of recreation services for each county by applying a standard, the SCORP provides information that allows North Carolina counties to be compared to each other according to current recreation resources and county population. The need for recreational facilities and acreage is based on population and thus, counties with the larger populations also need more park acreage and recreational facilities. But on a per capita basis, all counties can be compared.

Population density across the state is shown on the map in Figure II-1. North Carolina's population is most concentrated in the central portion of the state, which includes the Piedmont crescent containing Mecklenburg, Guilford, Wake, Forsyth, and Durham counties.

To compare counties according to recreation resources and population, each county population is divided by the park acreage and recreation facility totals for that county. The calculations indicate the number of number of county residents per park acre or recreation facility. After calculating these numbers for each North Carolina county, all 100 counties can be ranked according to residents per acre (or facility). Counties with high numbers of residents per park acre rank lower, in terms of sufficiency, than counties with fewer residents per park acre because more people have to compete to use existing park land.

Figures II-2 through II-13 show all North Carolina counties shaded according to the residents per park acre for two park acreage classes (local parks and dispersed-use acreage) as well as the residents per facility for 10 recreational facilities (baseball fields, basketball courts, golf courses, playgrounds, swimming pools, tennis courts, tent and trailer campsites, trail miles, soccer fields, and softball fields). On each map, counties with darker, more solid shading have fewer residents per park acre or recreation facility and counties with lighter shading have more residents per resource.

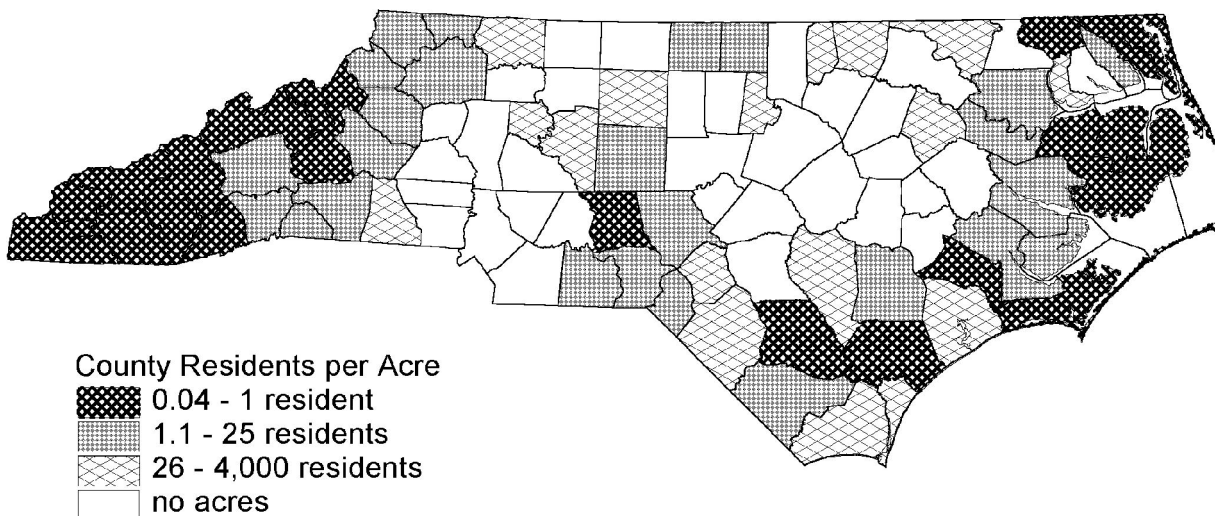
In addition to the maps that compare all North Carolina counties according to residents per acre or facility, Appendix A contains 100 county profiles. Each profile presents the county population and the current supply of recreation facilities and park acreage. The profile also presents several calculations based on residents per acre or facility, the county's ranking in the state, and the state median.



Source: N.C. State Demographics

Figure II-1. Population Density by County

County Residents per Dispersed Use Acre



County Residents per Regional Park Acre

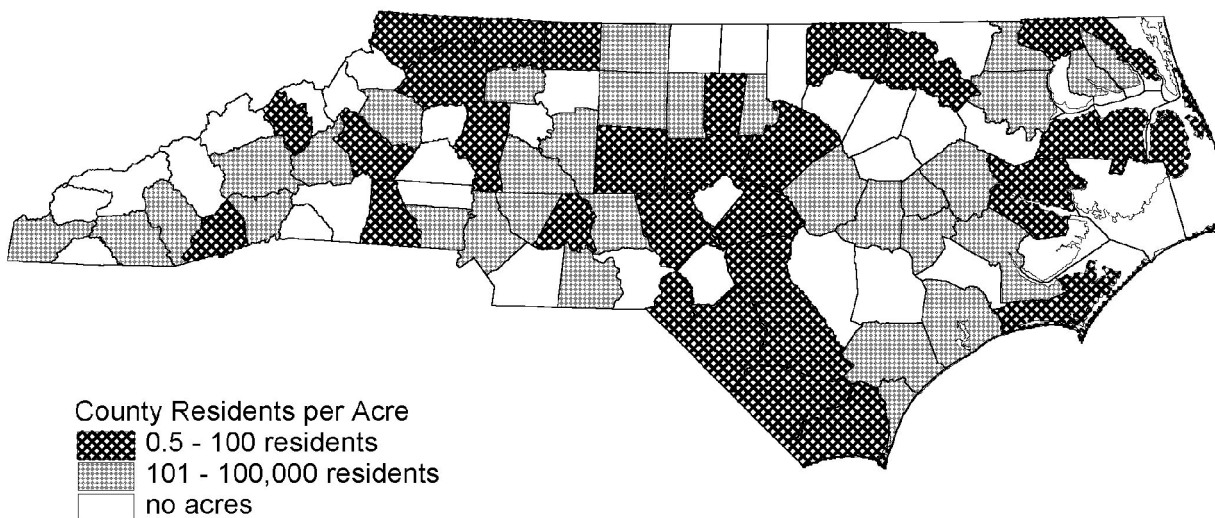
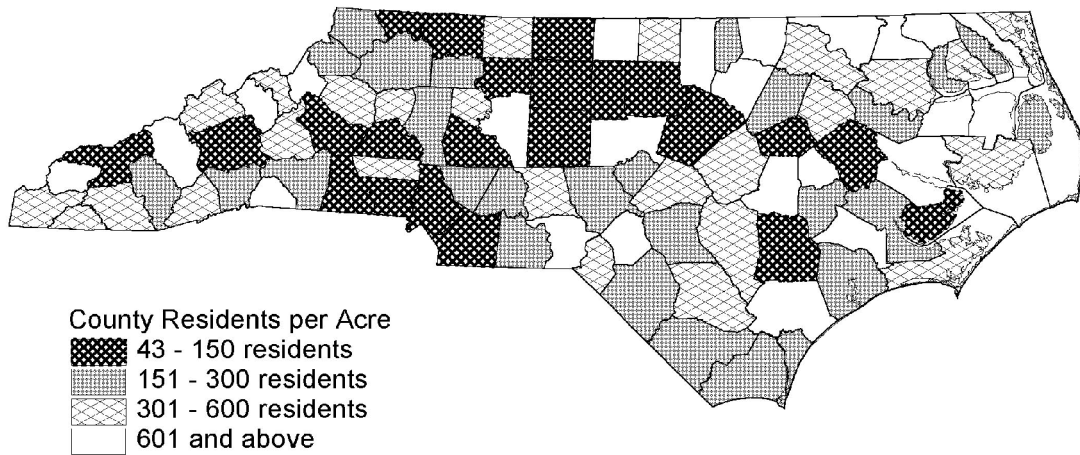


Figure II-2. Residents per Dispersed Use Acre;
Figure II-3. Residents per Regional Park Acre

County Residents per Local Park Acre



County Residents per Baseball Field

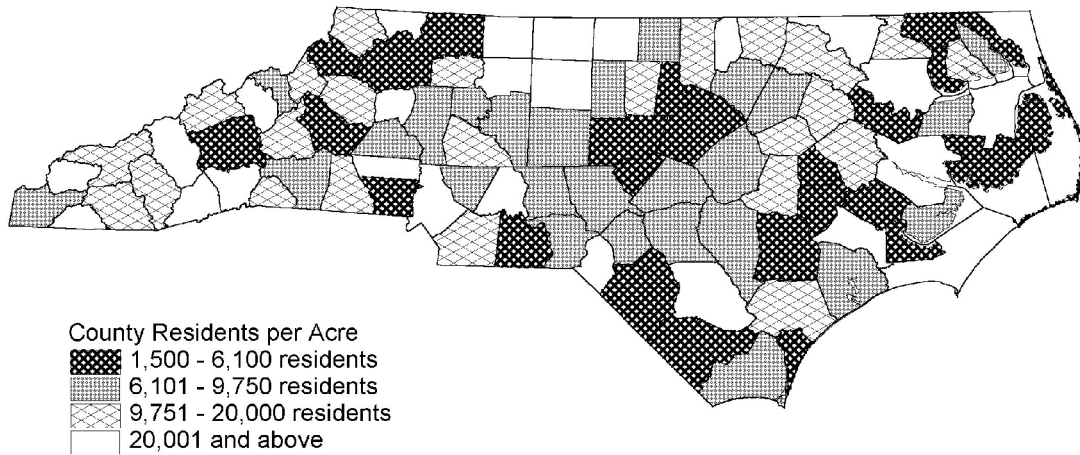
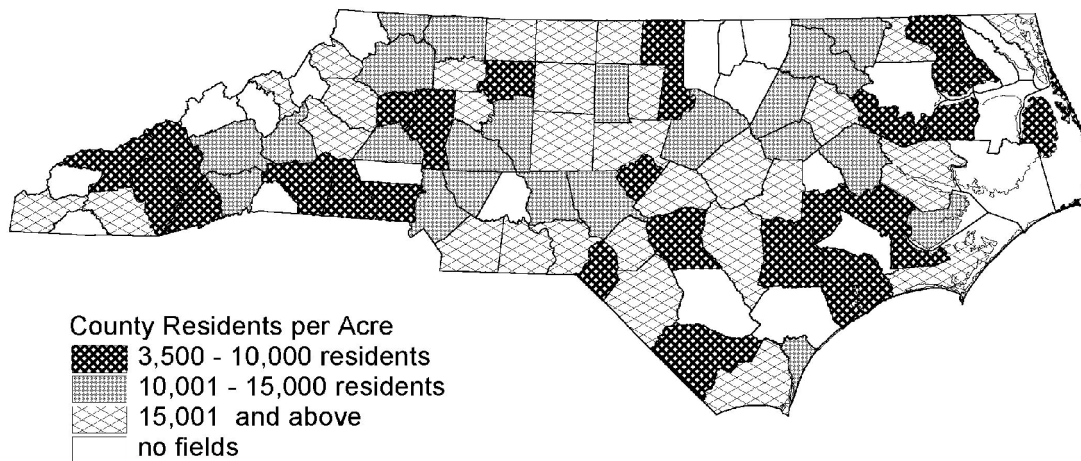


Figure II-4 Residents per Local Park Acre;

Figure II-5. Residents per Baseball Field

County Residents per Softball Field



County Residents per Baseball / Softball Multipurpose Field

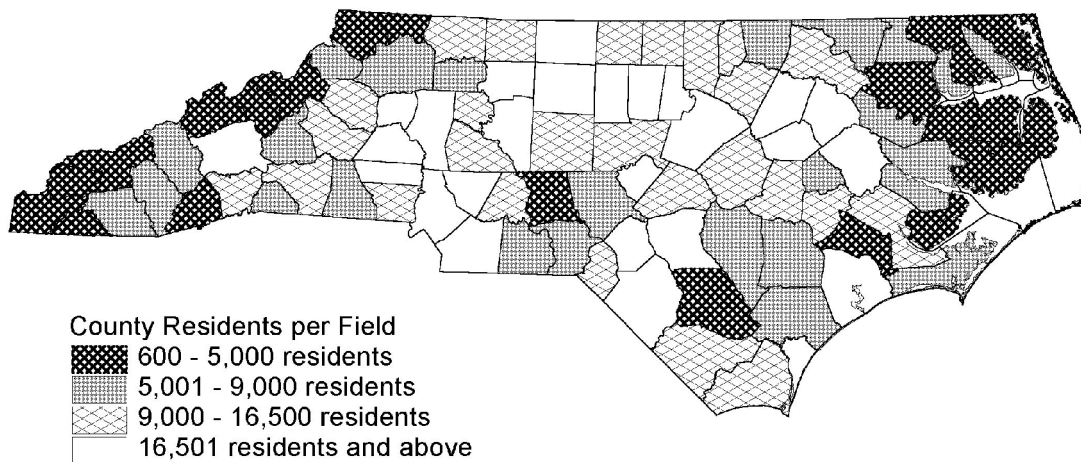
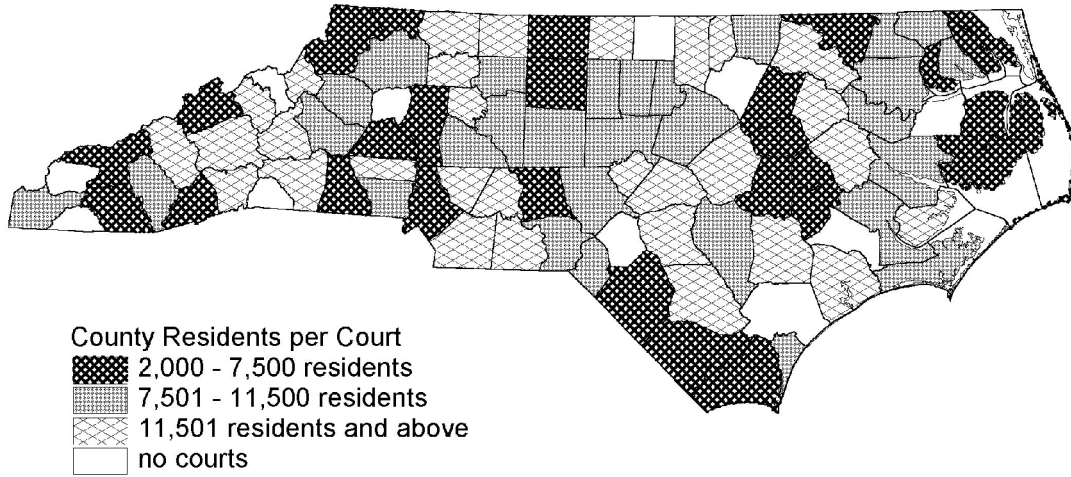


Figure II-6. Residents per Softball Field; Figure II-7 Residents per Baseball / Softball Field

County Residents per Basketball Court



County Residents per Picnic Shelter

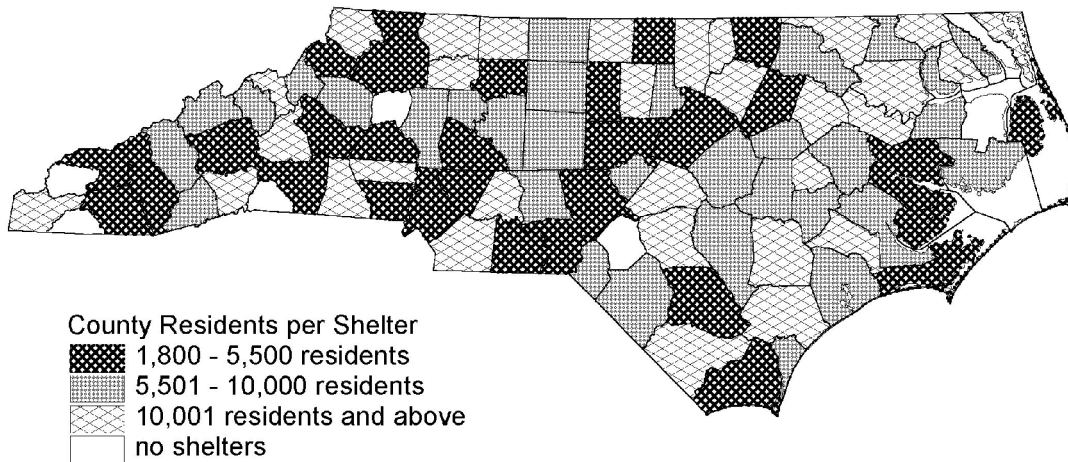
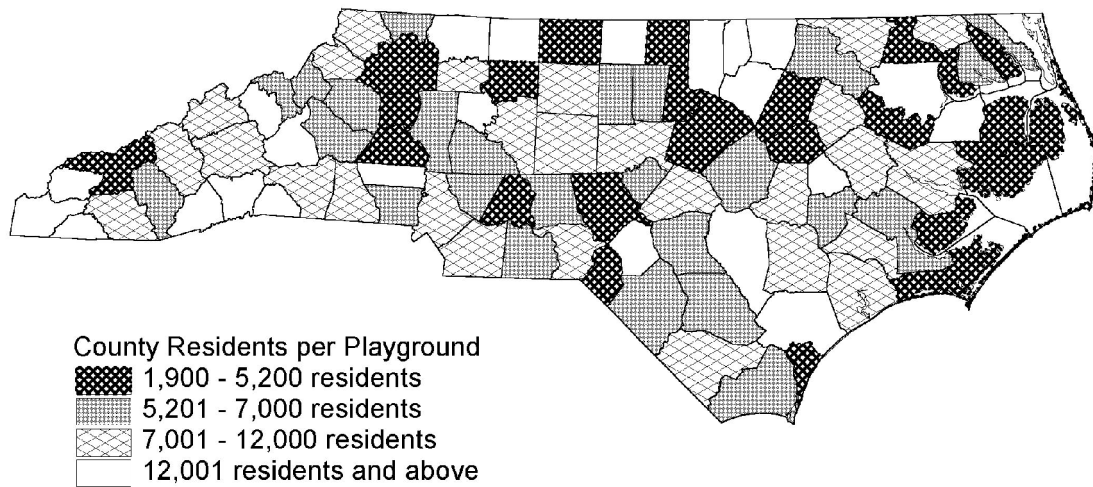


Figure II-8. Residents per Basketball Court; Figure II-9 Residents per Picnic Shelter

County Residents per Playground



County Residents per Football Field

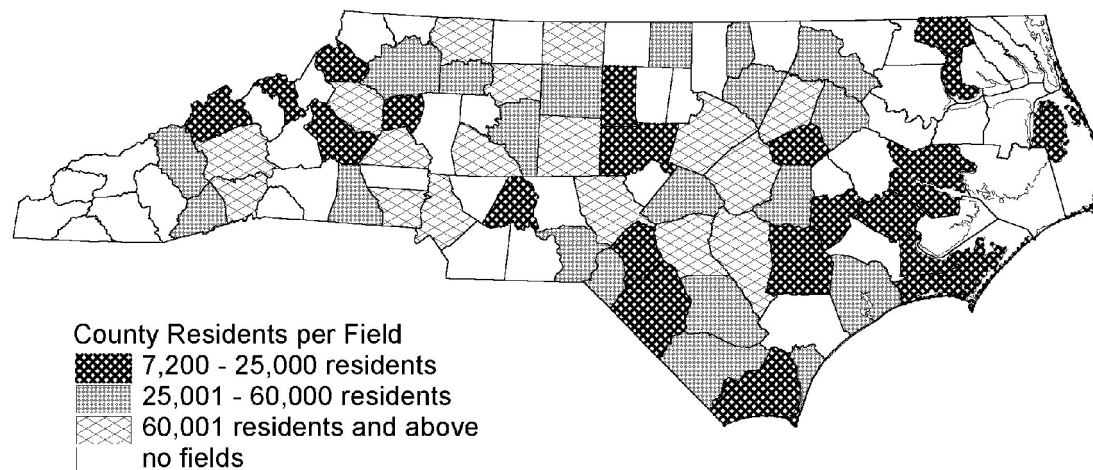
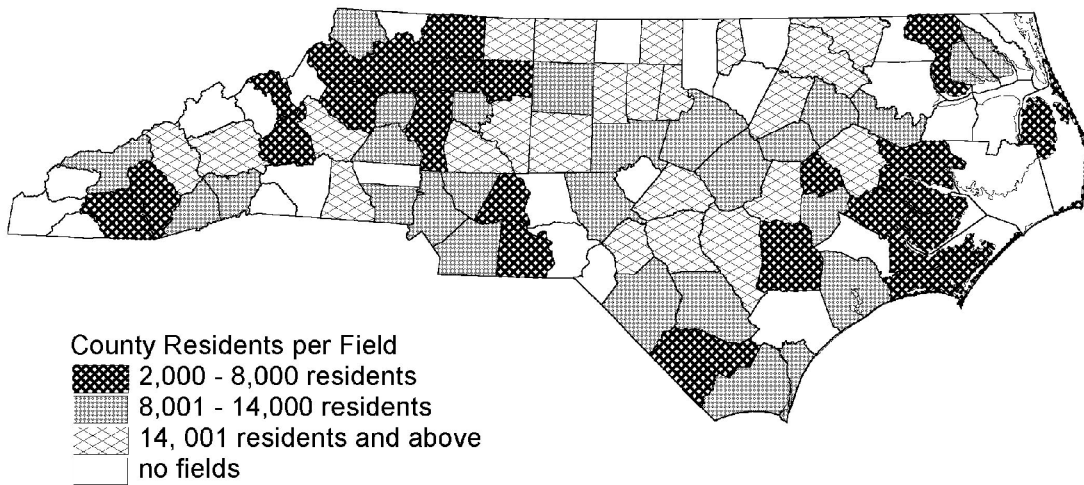


Figure II-10. Residents per Playground; Figure II-11 Residents per Football Field

County Residents per Soccer Field



County Residents per Football / Soccer Multipurpose Field

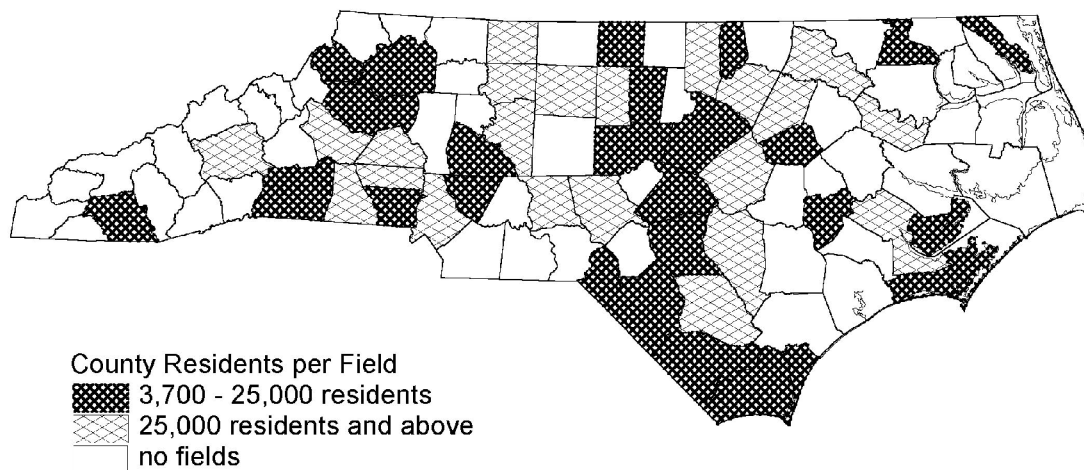
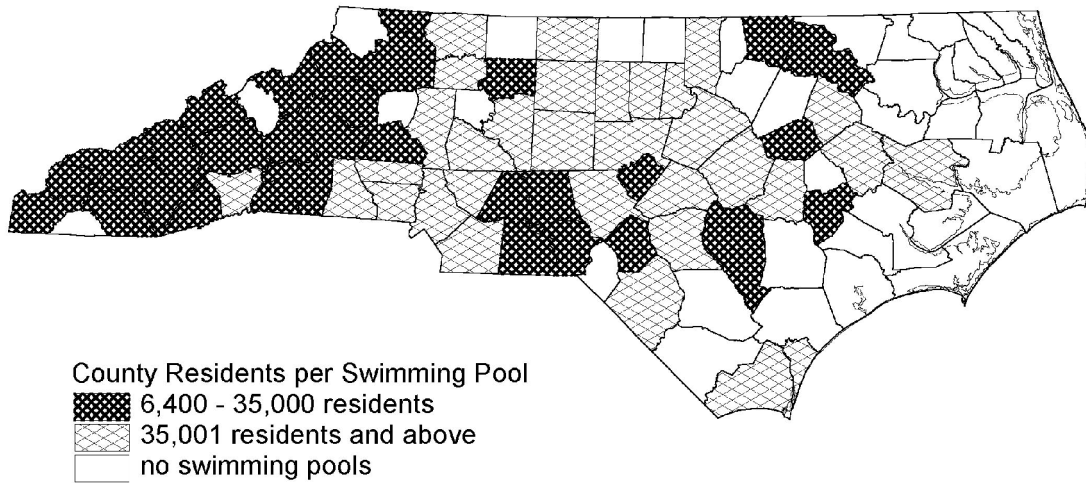


Figure II-12. Residents per Soccer Field; Figure II-13. Residents per Football/ Soccer Field

County Residents per Swimming Pool



County Residents per Tennis Court

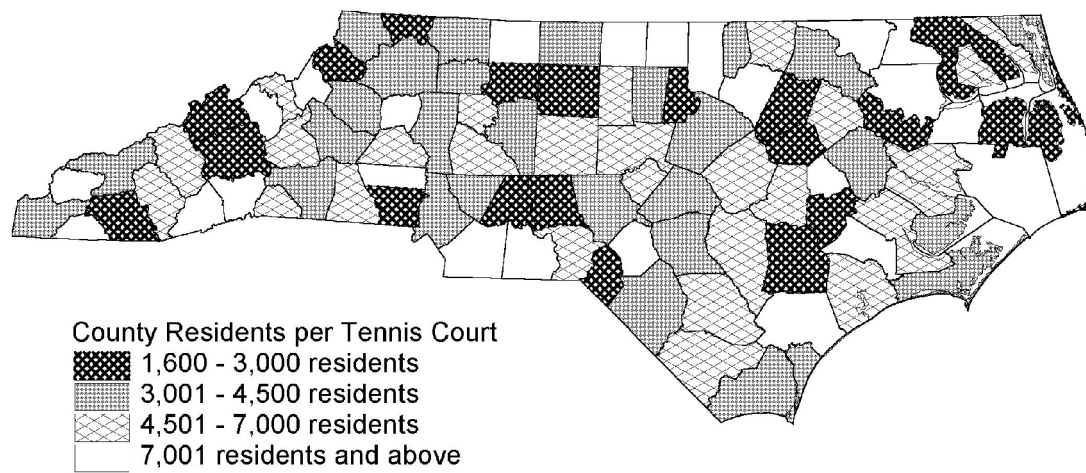


Figure II-14. Residents per Swimming Pool; Figure II-15. Residents per Tennis Court

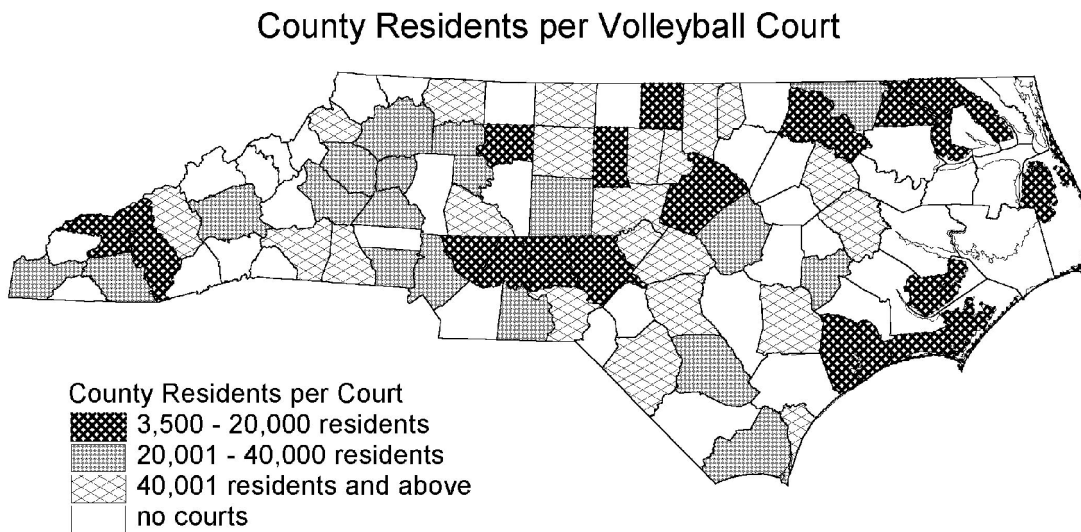
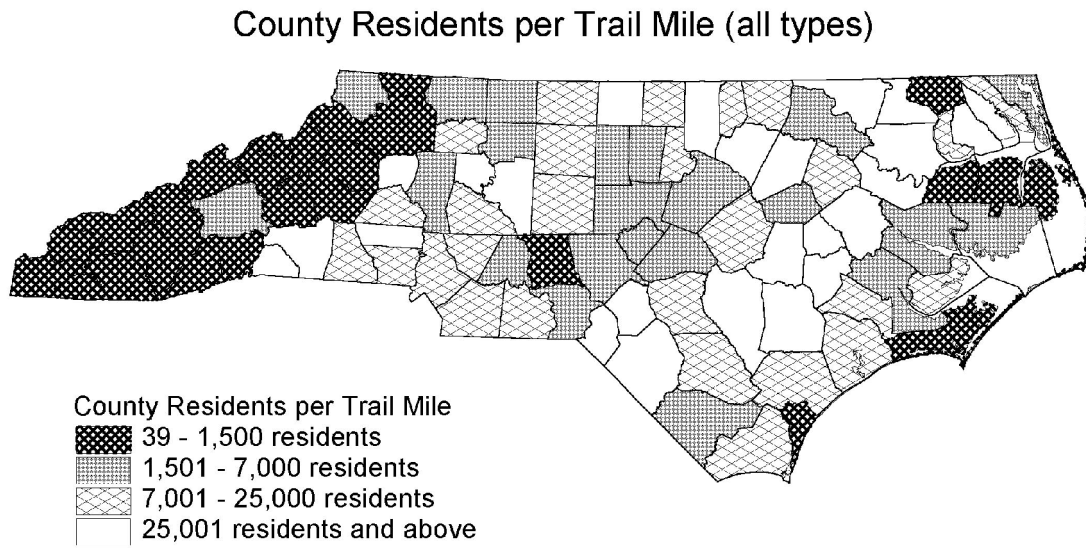


Figure II-16. Residents per Trail Mile; Figure II-17. Residents per Volleyball Court

THE NORTH CAROLINA OUTDOOR RECREATION SURVEY

Participation in Outdoor Recreation

The North Carolina Outdoor Recreation Participation Survey was mailed to 3,100 randomly selected residents. Forty-five percent or 1,399 people returned completed surveys. Each person receiving the survey was asked to estimate the number of times the members of his or her household had participated in each of 43 activities listed on the survey form.

The survey results provide good insight into the current participation of North Carolinians in a wide range of outdoor recreational activities. The most popular activities can be determined by identifying the activities in which the highest percentage of the population participates. The survey results also show which leisure activities are important parts of daily routine. These regular activities are ones that respondents report participating in many times during the year. Because the survey requested demographic information, recreation participation of groups with different household characteristics, such as income, can be compared.

Survey Results

The five most popular outdoor recreational activities in North Carolina are walking for pleasure, driving for pleasure, viewing scenery, beach activities, and visiting historical sites. Three out of every four households participated in walking for pleasure at least once in the past 12 months (Table II-6). Over 50 percent of the households responding also participated at least once in the following activities: swimming (in lakes, rivers, or oceans), visiting natural areas, picnicking, attending sports events, visiting zoos, and freshwater fishing. Traveling to and from outdoor recreation areas is also often required for participation.

A look at the most popular activities reveals that they can generally be enjoyed at a relatively low cost. They also generally require limited physical exertion and little in the way of expensive special equipment or special skills. No doubt these factors contribute to their popularity. Walking for pleasure, the most popular activity, can take place in numerous settings including neighborhoods or hiking trails through undeveloped areas.

Many of the most popular activities focus on viewing and learning, and thus can be potentially enjoyed by almost everyone. Visiting natural areas, trails, zoos, and historic sites, where one can view and learn about the natural environment, wildlife, culture and history is a significant reason for outdoor recreation in North Carolina, as participation shows.

North Carolina is famous for its beaches. Visiting a beach has long been a favorite way to spend time, whether for part of a day or longer periods like a vacation week. Visiting a freshwater or ocean beach is often associated with participation in other popular outdoor recreation activities including swimming, fishing, boating, walking, and viewing scenery. Where possible, federal, state, and local government agencies should emphasize acquisition and development of water-based and beach access sites for the public's use and enjoyment.

Table II-6. Most Popular Outdoor Recreational Activities.

Rank	Activity	Percentage of Households Participating
1.	Walking for Pleasure	75 %
2.	Driving for Pleasure	72
3.	Viewing Scenery	71
4.	Beach Activities	69
5.	Visiting Historical Sites	62
6.	Swimming (in Lakes, Rivers, and Oceans)	54
7.	Visiting Natural Areas	53
8.	Picnicking	52
9.	Attending Sports Events	52
10.	Visiting Zoos	51
11.	Fishing - Freshwater	50
12.	Use of Open Areas	41
13.	Swimming (in Pools)	40
14.	Fishing - Saltwater	38
15.	Attending Outdoor Cultural Events	35
16.	Bicycling for Pleasure	32
17.	Other Winter Sports	31
18.	Camping, Tent or Vehicle	29
19.	Softball and Baseball	28
20.	Hunting	28
21.	Use of Play Equipment	28
22.	Power Boating	26
23.	Trail Hiking	26
24.	Jogging or Running	24
25.	Basketball	24
26.	Nature Study	22
27.	Golf	22
28.	Target Shooting	20
29.	Water Skiing	19
30.	Camping, Primitive	14
31.	Tennis	14
32.	Use Motorcycles, Dirt Bikes, ATV's	13
33.	Use Four Wheel Drive Vehicles	13
34.	Canoeing and Kayaking	13
35.	Horseback Riding	12
36.	Volleyball	12
37.	Downhill Skiing	12
38.	Football	11
39.	Soccer	7
40.	Sailboating	7
41.	Skateboarding	6
42.	Cross Country Skiing	2
43.	Windsurfing	1

Driving for pleasure and viewing scenery cover a wide range of sites and areas of the state from the mountains to the coast. Many popularly visited attractions that often involve a long trip are concentrated on public land such as state or national parks and forests or public beaches. With the numbers of older and retired people increasing, it is easy to picture the popularity of driving for pleasure and viewing scenery increasing.

Participation Rates

A second measure of the current demand for outdoor recreation is the participation rate, the average number of occasions per year each household participates in the activity (Table II-7). An occasion occurs when a person spends a day or any part of a day participating in an outdoor recreation activity.

The household participation rate is useful in comparing activities. Some activities, such as picnicking, are popular with a large percentage of the population (52 percent), although the average household picnics only a few times a year (4.26 times). Other activities, such as using four-wheel-drive vehicles, have a relatively small group (13 percent) of avid enthusiasts who participate regularly, almost 24 occasions per year. The average participation rate among all households for these two activities is about three or four occasions annually.

Higher Participation Rates

The top three activities based on participation rate – walking for pleasure, driving for pleasure, and viewing scenery – are also the three most popular activities. The presence of three fitness-related activities – walking, jogging or running, and bicycling – in the top five demonstrates the degree to which North Carolinians are developing healthy lifestyles through regular exercise. Walking, the top activity, is also the activity available to the greatest percentage of the population. Barriers to participation in many activities – such as age, health, and equipment – are less significant for walking. Jogging or running, the 24th most popular activity, was not participated in by three of four households. When households did participate, however, they did so frequently, an average of 14.12 times. The frequency of participation therefore results in jogging or running having the fourth highest participation rate. Bicycling for pleasure and nature study also move up considerably in the rankings due to relatively higher participation rates. (Table II-7)

Lower Participation Rates

Activities with low participation rates are still important to North Carolina. The activities with the five lowest participation rates – canoeing/kayaking, downhill skiing, sailboating, windsurfing, and cross-country skiing – are significant components of the state's commercial outdoor recreation industry. This is particularly true in specific locations where the natural resource base is conducive to these activities, such as skiing in the mountains and sailing and windsurfing in the east.

Visiting historic sites, visiting zoos and attending outdoor cultural events are all popular activities that have relatively lower participation rates. People enjoy these activities but take part in them only occasionally. The participation rate ranking for these activities is therefore much lower than their popularity ranking.

Table II-7. Household Participation Rates and Total Participation by Activity

Rank	Activity	Popularity Ranking	*Household Participation Rate	**Annual Activity Days
1.	Walking for Pleasure	1	49.97	114,627,384
2.	Driving for Pleasure	2	32.69	74,998,550
3.	Viewing Scenery	3	31.39	72,009,299
4.	Jogging or Running	24	14.12	32,398,844
5.	Bicycling for Pleasure	16	11.17	25,613,867
6.	Beach Activities	4	10.78	24,725,323
7.	Swimming (in Pools)	13	10.10	23,173,846
8.	Fishing (Freshwater)	11	9.97	22,875,728
9.	Nature Study	26	8.79	20,162,276
10.	Attending Sports Events	9	8.59	19,709,640
11.	Swimming (in Lakes, Rivers, Ocean)	6	8.31	19,069,390
12.	Use of Open Areas	12	7.53	17,268,402
13.	Visiting Natural Areas	7	6.75	15,483,265
14.	Basketball	25	6.68	15,334,444
15.	Golf	27	6.58	15,100,661
16.	Softball and Baseball	19	6.40	14,686,533
17.	Hunting	20	6.27	14,392,921
18.	Use of Play Equipment	21	6.09	13,969,556
19.	Power Boating	22	5.54	12,709,023
20.	Fishing (Saltwater)	14	5.28	12,104,020
21.	Picnicking	8	4.26	9,771,716
22.	Tennis	31	3.84	8,819,411
23.	Camping (Tent or Vehicle)	18	3.35	7,683,340
24.	Visiting Historical Sites	5	3.30	7,575,151
25.	Use Motorcycles, Dirt Bikes, ATV's	32	3.10	7,110,251
26.	Use of Four-Wheel-Drive Vehicles	33	2.98	6,847,565
27.	Target Shooting	28	2.81	6,435,032
28.	Water Skiing	29	2.49	5,707,906
29.	Horseback Riding	35	2.46	5,652,074
30.	Trail Hiking	23	2.46	5,650,553
31.	Football	38	1.96	4,507,538
32.	Attend Outdoor Cultural Events	15	1.82	4,164,037
33.	Soccer	39	1.78	4,078,952
34.	Volleyball	36	1.72	3,939,374
35.	Skateboarding	41	1.53	3,502,578
36.	Other Winter Sports	17	1.43	3,272,146
37.	Visiting Zoos	10	1.24	2,854,316
38.	Camping, Primitive	30	0.87	1,988,790
39.	Canoeing and Kayaking	34	0.66	1,520,576
40.	Downhill Skiing	37	0.64	1,464,744
41.	Sailboating	40	0.54	1,249,631
42.	Windsurfing	43	0.12	275,674
43.	Cross Country Skiing	42	0.08	175,578
Totals:			298.44	684,660,908

*Household Participation Rate = the average number of occasions per year each household participates

**Annual Activity Days = the household participation rate multiplied by the 2,294,000 households in NC

Total Participation in Outdoor Recreation

These participation rates for the average household in North Carolina present a picture of an active population. The average household reported participating in the activities on the survey almost 300 occasions per year. When participation in all the activities is totaled and multiplied by the total number of households, the result is 684.7 million annual activity occasions (Table II-7).

Activity Preferences by Social Groups

Age

Activity preferences vary among different age groups in North Carolina. Activities requiring significant endurance or strength and team sports are usually more popular among younger age groups. The preferences of older age groups are becoming increasingly important to society as the Baby Boom generation reaches middle age and the elderly population increases.

Households with a respondent in the 25-to-44-year-old age group participate more frequently in fitness activities, activities involving small children, and water-oriented activities. Specific activities include bicycling, jogging or running, use of play equipment, and swimming in lakes, rivers, and oceans (Table II-8).

Table II-8. Recreational Activities More Popular in Households with a Respondent in the 25-44 Year Old Age Group.*

ACTIVITY	AGE GROUP IN YEARS					
	Under 24	25-34	35-44	45-54	55-64	Above 65
Bicycling for Pleasure	17.8	33.2	35.3	23.3	19.4	14.1
Jogging or Running	36.2	41.6	56.8	69.9	33.4	25.7
Use of Play Equipment	14.8	25.3	19.1	11.3	11.2	9.7
Use of Open Areas	24.7	20.3	16.7	11.4	12.9	14.7
Beach Activities	14.8	17.1	15.5	13.8	14.5	12.3
Swimming (Lakes, Rivers, Oceans)	12.7	15.2	15.6	14.5	14.3	7.1
Attending Sporting Events	13.4	18.4	17.8	15.9	10.5	11.1
Skateboarding	3.3	7.4	19.7	2.4	1.9	4.9

* Popularity is measured by average number of activity days by participants in each age group.

Survey respondents 55 years old and above reported participating in physically passive activities more frequently than other age groups. These activities include walking for pleasure, tent or vehicle camping, nature study, power boating, and salt water fishing (Table II-9).

Table II-9. Recreational Activities Popular in Households with a Respondent in the Above-55-Year-Old Age Group.*

ACTIVITY	AGE GROUP IN YEARS					
	Under 24	25-34	35-44	45-54	55-64	Above 65
Walking for Pleasure	56.2	58.7	59.2	69.7	84.6	71.1
Camping, Tent or Vehicle	4.3	8.5	9.2	10.1	15.3	13.4
Nature Study	20.5	27.1	19.3	60.1	44.7	38.6
Tennis	9.4	14.6	15.7	22.0	24.6	19.1
Power Boating	11.3	16.5	14.7	22.1	26.4	14.9
Fishing, Saltwater	6.0	10.0	12.2	12.4	16.9	9.6

* Popularity is measured by average number of activity days by participants in each age group.

Households with Children

The survey presents insights on the recreational preferences of the different demographic groups in North Carolina. For example, survey respondents from households with children have different preferences than households without children. Households with children participate more frequently in activities such as tent or vehicle camping, use of play equipment, football, golf, skateboarding, beach activities, and use of motorcycles, dirt bikes, and ATV's (Table II-10).

Table II-10. Comparison of Recreational Preferences of Households With and Without Children*

ACTIVITY	NO CHILDREN		WITH CHILDREN	
	SINGLE	COUPLE	SINGLE	COUPLE
Camping, Tent or Vehicle	6.7	8.0	10.3	10.4
Use of Play Equipment	6.0	10.5	14.2	22.6
Football	7.3	8.3	11.9	11.7
Golf	17.5	18.3	27.3	23.9
Skateboarding	.8	.6	12.2	15.6
Beach Activities	12.9	12.1	16.3	16.1
Use of Motorcycles, Dirt Bikes, ATV's	8.2	7.8	16.7	19.5

* Popularity is measured by average number of activity days by participants in each type of household.

Household Income

Lower income households generally participate in outdoor recreation less frequently than those with higher incomes. This is particularly the case with activities such as soccer, tennis, water skiing, downhill skiing, and using motorcycles, dirt bikes, and ATV's, most of which require the use of expensive equipment (Table II-11).

Table II-11. Recreational Activities More Popular Among Higher Income Households.*

ACTIVITY	\$0- \$14,999	\$15,000- \$24,000	\$25,000- \$34,999	\$35,000- \$44,999	\$45,000- \$59,999	Above \$60,000
Soccer	3.8	6.2	13.0	19.6	11.0	26.0
Tennis	8.6	10.0	12.5	21.1	13.9	27.6
Water Skiing	6.6	8.9	5.5	9.0	8.5	13.11
Downhill Skiing	2.7	1.6	1.6	2.8	3.0	4.7
Use of Motorcycles, Dirt Bikes, & ATV's	11.2	12.8	15.2	17.3	18.7	16.3

* Popularity is measured by average number of activity days by participants in each income group.

Lower income households do participate in some activities more frequently than other households. These activities include driving for pleasure, viewing scenery, nature study, use of open areas, and basketball (Table II-12).

Table II-12. Recreational Activities More Popular Among Lower Income Households.*

ACTIVITY	\$0- \$14,999	\$15,000- \$24,000	\$25,000- \$34,999	\$35,000- \$44,999	\$45,000- \$59,999	Above \$60,000
Driving for Pleasure	63.4	47.3	49.2	39.7	40.7	25.7
Viewing Scenery	46.8	52.9	46.6	38.6	37.3	34.4
Nature Study	38.7	44.7	24.0	29.7	32.9	32.9
Use of Open Areas	21.3	24.8	16.7	13.1	15.5	8.4
Use of Play Equipment	19.6	23.1	19.5	15.2	17.2	17.0
Basketball	17.4	29.4	25.0	22.8	17.2	21.9

* Popularity is measured by average number of activity days by participants in each income group.

Future Outdoor Recreational Needs

Estimating outdoor recreational needs involves anticipating what North Carolinians will want in the future. As the state's population changes, so do public needs and preferences for outdoor recreation. Given the limited public funding for recreation, it is important to efficiently spend the money that is available.

The North Carolina Outdoor Recreation Survey asked residents to identify and rank their future public outdoor recreational needs. This is in contrast to current participation rates that reflect the park and recreation opportunities available today.

Future Demand

Asking about future needs was a two-step process on the survey. First, respondents were asked to review a list of activities (Appendix B) and identify up to 10 in which their households would probably have participated more often, or at least tried, if good programs and facilities had been available. From this list of 10 activities, the respondents were asked to select the five activities most important to them and list them in priority order. These five choices were assigned scores described in Appendix B, and an average score was calculated for all the survey respondents.

The future demand for each activity was rated as high, moderate, or low based on the average score it received. High future demand was assigned to activities that were ranked at least fifth by at least one half of the respondents. An activity with moderate future demand was ranked at least fifth by at least one quarter of the respondents. All other activities were assigned low future demand. Eight activities were rated as having high future demand: walking for pleasure, freshwater fishing, beach activities, tent or vehicle camping, bicycling for pleasure, picnicking, swimming in pools, and attending outdoor cultural events (Table II-13).

Public Funding Priorities

Public priorities for funding future outdoor recreational facilities and programs were measured in much the same way as future demand. Respondents were asked to review the same list of activities and identify up to 10 that state and local government should do the most to provide and improve. From this list of 10 activities, the respondents were asked to list the five activities they considered most important, in priority order. These five choices were assigned scores described in Appendix B, and an average score was calculated for all the survey respondents.

The support for public funding of each activity was rated as high, moderate, or low based on the average score it received. High, moderate and low support were assigned using the same method as with the demand calculations. Ten activities were rated as having high support for public funding: walking for pleasure, tent and vehicle camping, picnicking, visiting historical sites, freshwater fishing, visiting natural areas, beach activities, visiting zoos, using play equipment, and attending outdoor cultural events (Table II-14).

Table II-13. Future Demand for Outdoor Recreational Activities.

Activity	Average Score	Future Demand
Walking for Pleasure	23.8	High
Fishing - Freshwater	15.5	High
Beach Activities	13.8	High
Camping, Tent or Vehicle	11.5	High
Bicycling for Pleasure	10.8	High
Picnicking	10.7	High
Swimming (in Pools)	10.6	High
Attend Outdoor Cultural Events	10.1	High
Hunting	9.1	Moderate
Visiting Natural Areas	8.6	Moderate
Fishing	8.6	Moderate
Driving for Pleasure	8.3	Moderate
Visiting Historical Sites	8.2	Moderate
Viewing Scenery	8.1	Moderate
Trail Hiking	7.6	Moderate
Swimming (Lakes, Rivers, Ocean)	7.2	Moderate
Use of Play Equipment	7.0	Moderate
Horseback Riding	7.0	Moderate
Golf	6.8	Moderate
Visiting Zoos	6.3	Moderate
Attending Sports Events	6.3	Moderate
Target Shooting	6.1	Moderate
Use of Open Areas	5.0	Moderate
Power Boating	4.6	Low
Jogging or Running	4.5	Low
Softball and Baseball	4.4	Low
Camping, Primitive	4.0	Low
Canoeing and Kayaking	3.5	Low
Tennis	3.2	Low
Nature Study	3.2	Low
Basketball	3.0	Low
Use Motorcycles, Dirt Bikes, ATV's	2.7	Low
Water Skiing	2.6	Low
Downhill Skiing	2.1	Low
Volleyball	1.5	Low
Use 4-Wheel-Drive Vehicles	1.4	Low
Sailboating	1.3	Low
Other Winter Sports	1.0	Low
Soccer	0.9	Low
Cross Country Skiing	0.7	Low
Football	0.7	Low
Skateboarding	0.5	Low
Windsurfing	0.4	Low

High - Ranked at least fifth by at least one half of the respondents.

Moderate - Ranked at least fifth by at least one quarter of the respondents.

Low - Did not rank at least fifth by at least one quarter of the respondents.

Table II-14. Support for Public Funding of Outdoor Recreational Activities.

Activity	Average Score	Future Demand
Walking for Pleasure	20.1	High
Camping, Tent or Vehicle	15.1	High
Picnicking	14.1	High
Visiting Historical Sites	14.0	High
Fishing - Freshwater	13.3	High
Visiting Natural Areas	13.0	High
Beach Activities	12.1	High
Visiting Zoos	12.0	High
Use of Play Equipment	10.5	High
Attend Outdoor Cultural Events	10.5	High
Bicycling for Pleasure	9.5	Moderate
Swimming (Lakes, Rivers, Ocean)	9.4	Moderate
Swimming (in Pools)	8.7	Moderate
Hunting	8.6	Moderate
Trail Hiking	8.5	Moderate
Use of Open Areas	7.6	Moderate
Viewing Scenery	7.6	Moderate
Fishing - Saltwater	7.0	Moderate
Camping, Primitive	5.5	Moderate
Target Shooting	5.0	Moderate
Driving for Pleasure	4.8	Low
Golf	4.1	Low
Attending Sports Events	4.1	Low
Horseback Riding	4.1	Low
Softball and Baseball	4.1	Low
Jogging or Running	3.9	Low
Nature Study	3.9	Low
Power Boating	3.4	Low
Basketball	2.7	Low
Tennis	2.5	Low
Canoeing and Kayaking	2.4	Low
Use Motorcycles, Dirt Bikes, ATV's	2.3	Low
Soccer	1.3	Low
Water Skiing	1.2	Low
Volleyball	1.1	Low
Downhill Skiing	1.1	Low
Use 4-Wheel-Drive Vehicles	1.1	Low
Other Winter Sports	1.0	Low
Sailboating	0.7	Low
Football	0.7	Low
Skateboarding	0.5	Low
Cross Country Skiing	0.4	Low
Windsurfing	0.2	Low

High - Ranked at least fifth by at least one half of the respondents.

Moderate - Ranked at least fifth by at least one quarter of the respondents.

Low - Did not rank at least fifth by at least one quarter of the respondents.

Priorities of Public Outdoor Recreation Funding

Priorities for publicly funded outdoor recreation can be measured by combining ratings for future demand and public funding priorities. Each activity received a rating of high, moderate, or low for both future demand and support for public funding. These ratings were combined to produce a score from 1 to 9 reflecting an overall priority for which 1 is the highest priority and 9 is the lowest. The combined rating is produced using a matrix that assigns a higher priority to support for public funding than future demand for the outdoor recreational activity (Table II-15).

Table II-15. Scoring Matrix for Ranking Future Recreation Priorities

FUTURE DEMAND	SUPPORT FOR PUBLIC FUNDING		
	High	Moderate	Low
High	1	3	6
Moderate	2	4	8
Low	5	7	9

Based on this analysis, the activities rated as the highest priorities are walking for pleasure, tent or vehicle camping, picnicking, beach activities, freshwater fishing, and attending outdoor cultural events (Table II-16). The bulk of expenditures of public money for outdoor recreation facilities should go towards these higher priorities.

Table II-16. Priorities for Public Outdoor Recreation Funding

Activity	Future Demand	Support for Public Funding	Combined Ranking
Walking for Pleasure	High	High	1
Camping, Tent or Vehicle	High	High	1
Picnicking	High	High	1
Beach Activities	High	High	1
Fishing - Freshwater	High	High	1
Attend Outdoor Cultural Events	High	High	1
Visiting Natural Areas	Moderate	High	2
Use of Play Equipment	Moderate	High	2
Visiting Zoos	Moderate	High	2
Visiting Historical Sites	Moderate	High	2
Bicycling for Pleasure	High	Moderate	3
Swimming (in Pools)	High	Moderate	3
Viewing Scenery	Moderate	Moderate	4
Hunting	Moderate	Moderate	4
Trail Hiking	Moderate	Moderate	4
Use of Open Areas	Moderate	Moderate	4
Target Shooting	Moderate	Moderate	4
Swimming (Lakes, Rivers, Ocean)	Moderate	Moderate	4
Fishing - Saltwater	Moderate	Moderate	4
Camping, Primitive	Low	Moderate	7
Driving for Pleasure	Moderate	Low	8
Horseback Riding	Moderate	Low	8
Golf	Moderate	Low	8
Attending Sports Events	Moderate	Low	8
Jogging or Running	Low	Low	9
Nature Study	Low	Low	9
Softball and Baseball	Low	Low	9
Basketball	Low	Low	9
Football	Low	Low	9
Soccer	Low	Low	9
Tennis	Low	Low	9
Volleyball	Low	Low	9
Skateboarding	Low	Low	9
Sailboarding	Low	Low	9
Windsurfing	Low	Low	9
Canoeing and Kayaking	Low	Low	9
Power Boating	Low	Low	9
Water Skiing	Low	Low	9
Downhill Skiing	Low	Low	9
Cross Country Skiing	Low	Low	9
Other Winter Sports	Low	Low	9
Use Motorcycles, Dirt Bikes, ATV	Low	Low	9
Use Four-Wheel-Drive Vehicles	Low	Low	9

NATIONAL SURVEY ON RECREATION AND THE ENVIRONMENT

The 2000 National Survey on Recreation and the Environment (NSRE) is the eighth in a series of national surveys started in 1960 by the Outdoor Recreation Resources Review Commission and now coordinated by the USDA Forest Service. The survey was accomplished by telephone sampling of approximately 50,000 households nationwide. Questions from the NSRE broadly address areas such as outdoor recreation participation, demographics, household structure, lifestyles, environmental attitudes, natural resource values, constraints to participation, and attitudes toward management policies. (<http://www.srs.fs.fed.us/trends/>)

Survey Results

Results of the recently completed 2000 NSRE are similar to those of the North Carolina Outdoor Recreation Survey as regards outdoor recreation participation, even though the two surveys used different survey methods, questions, and recreation activity categories for compiling results. Both surveys found high levels of participation and similarities for the popularity of various activities. Popularity is measured by the percentage of people age 16 and over that participate.

The 2000 NSRE found that over 97 percent of Americans age 16 and over participated in at least one of the almost 80 recreation activities surveyed during the year prior to their interview. While reasons for participation are varied – for exercise and health, as part of a vacation, for team or individual competition, or just for fun – it is obvious that demand for outdoor recreation is high.

Walking for pleasure was the single most popular activity in the nation and in the South, with over 83 percent of the population age 16 and over participating. People often walk close to home, and they average walking approximately twice a week. In the South, 58.5 percent regularly take walks in their neighborhood or in nearby parks. Walking is an especially popular activity for older Americans, and it accommodates a wide range of income levels. It is also a healthy activity and form of exercise that can be undertaken at one's own pace. With the population of North Carolina and the nation aging, it is very likely that the popularity of walking will continue and even increase in the coming years.

Walking and other popular forms of outdoor recreation owe some of their popularity to their relatively low costs. They also generally require limited physical exertion and little expensive equipment or special skills. More rigorous activities, in general, are less popular as many people – particularly those over the age 60 – do not have the strength or endurance to participate. Physical fitness activities, however, are growing in popularity among older adults. Approximately 50 percent of surveyed people over age 60 continue to walk outdoors. While some activities – such as walking – do not require specific facilities or settings, many activities do require or are improved by facilities or a particular setting. Local, state and federal agencies are providers for much of the land that is used for outdoor recreation.

Table II-17: Outdoor Recreation Activity Participation (Age 16 and Older)

Rank	Activity	Percentage Participating	
		South	United States
1.	Walking for Pleasure	83.08	84.85
2.	Family Gathering	71.91	73.85
3.	All Sightseeing, Driving, Etc.	62.76	63.04
4.	All Swimming, Diving, Etc.	58.35	60.79
5.	Visit Nature Centers/Trail/Zoo	53.69	59.27
6.	Sightseeing	53.04	53.98
7.	Driving for Pleasure	52.77	53.66
8.	Picnicking	49.73	57.34
9.	View/Photograph Natural Scenery	46.56	55.09
10.	Visit Historic Sites	43.83	48.71
11.	Non-Pool Swimming	42.35	44.38
12.	All Fishing	39.05	31.80
13.	View/Photograph Other Wildlife	36.83	41.05
14.	View/Photograph Flowers, Etc.	36.68	41.19
15.	Visit Beach	36.45	39.96
16.	All Nature Viewing/Photography	35.92	41.68
17.	Bicycling	35.03	41.63
18.	All Boating	34.32	36.91
19.	Freshwater Fishing	33.40	27.80
20.	Visit a Wilderness	31.11	35.45
21.	Warmwater Fishing	28.45	20.17
22.	View or Photograph Birds	27.47	30.07
23.	Day Hiking	27.43	36.48
24.	Visit Waterside Besides Beach	27.07	27.09
25.	Gather Mushrooms, Berries, Etc.	25.54	27.97
26.	Motorboating	24.86	23.90
27.	View or Photograph Fish	21.39	21.68
28.	Outdoor Team Sports	21.33	22.51
29.	Developed Camping	20.70	26.83
30.	Visit Prehistoric Sites	19.53	21.30
31.	Drive Off-Road	17.81	17.01
32.	Mountain Biking	16.15	23.39
33.	Saltwater Fishing	13.82	7.90
34.	All Snow/Ice Activities	13.14	31.58
35.	Primitive Camping	13.05	16.18
36.	All Hunting	12.77	10.54
37.	Horseback Riding	10.59	9.99
38.	Coldwater Fishing	10.37	14.37
39.	Jet Skiing	10.03	8.85
40.	Rafting	9.16	9.95
41.	Horseback Riding on Trails	8.87	8.09
42.	Waterskiing	8.72	7.92
43.	Backpacking	8.61	12.15
44.	Small Game Hunting	8.54	6.46
45.	Canoeing	7.51	10.23
46.	Snorkeling	6.13	6.95
47.	Downhill Skiing	4.37	10.26
48.	Sailing	3.99	5.43
49.	Rowing	3.31	4.99
50.	Anadromous Fishing	3.16	4.83
51.	Migratory Bird Hunting	2.73	2.21
52.	Scuba Diving	2.14	1.77
53.	Snowboarding	2.02	5.83
54.	Kayaking	1.82	3.51
55.	Surfing	1.48	1.52
56.	Snowmobiling	1.36	7.06
57.	Cross-Country Skiing	1.22	5.03
58.	Windsurfing	0.75	0.85

Source: 2000 National Survey on Recreation and the Environment, USDA Forest Service and the University of Tennessee, Knoxville, Tennessee.

Table II-17 shows the most popular activities in the South and United States by percentage participating. While participation in the South is generally very similar to the rest of the country, regional differences in climate, topography, population density and culture lead to some variations in recreation patterns. Snow and ice activities are more popular in colder climates found further north, for example, while salt water fishing is a difficult endeavor for many living in the inland United States.

Picnicking is enjoyed by almost half of Southerners. While picnicking can take place in a wide variety of settings, many of the sites for picnicking have traditionally been provided by public agencies. Picnicking is, like walking, a low-cost activity that requires no special skills or expensive equipment and can also be enjoyed by all ages. Family gatherings outdoors often include picnicking.

Several popular activities involve satisfying people's curiosity about nature, history and culture. Visiting nature centers and historic sites rank as popular activities. Public agencies provide many of these facilities and sites. Visiting nature centers and historic sites often provide information and a starting point that encourages participation in other related outdoor recreation activities such as viewing and photographing wildlife and flowers, bird watching or hiking a trail.

Sightseeing includes a wide variety of sites and attractions, many of which are found on public land. The private sector, however, provides much of the services and equipment sightseers use, such as cameras and film, transportation, food and lodging, and souvenirs.

Water-based settings have been and continue to be popular for outdoor recreation. Non-pool swimming was enjoyed by 42 percent of Southerners over age 16; fishing by 39 percent; visiting a beach by 36 percent; boating by 34 percent; and visiting a waterside (other than a beach) by 27 percent. Water-based settings also provide opportunities for engaging in a variety of other outdoor recreation activities such as picnicking, walking and studying nature. Water-based outdoor recreation opportunities are not convenient to many. Participation percentages would no doubt be higher if additional water-based area and facilities existed.

Even activities with relatively low popularity have a large number of participants. In North Carolina, a one percent participation rate would result in almost 80,500 participants. Windsurfing, the bottom rated activity on Table II-17, had approximately 60,370 participants. There is therefore a demand for areas to pursue low-rated activities.

Some people participate in an activity only once or twice a year. Others, particularly persons who can be termed enthusiasts, do so much more frequently. Frequency of participation also varies with the activity. Over 80 percent of backpackers participate ten or fewer days a year, while approximately 36 percent of bicyclers and 32 percent of swimmers participate more than 25 days.

There is a tendency for people to seek different kinds of outdoor recreation experiences. Often an interest in one type of activity means that a person will also have an interest in other related activities. A person interested in running or jogging is likely to also be interested in other fitness-related activities such as bicycling, swimming, hiking or biking. Interest in one sport often portends interest in other sports. Nature interest is often broadbased, with nature study, birding, walking and

wildlife viewing and photography likely to be of interest. Hunters often love to fish as well. Such patterns of participation are tendencies to enjoy related types of activities.

The NSRE also looked at constraints to outdoor recreation participation. A lack of time and money was most frequently cited as a limiting factor. A lack of people to participate with also proved problematic. The NSRE revealed that the likelihood of participation went up as the number of people in a household increased from one to four. Team sports and camping are two activities with such increases. Above four, no additional participation was found.

Inadequate information and personal safety were two other primary constraints. Information distribution may be as much or more of a problem than lack of information. Concerns for personal safety were most often expressed by females.

The 2000 NSRE and earlier versions of the survey have found that there has been a trend for a higher proportion of citizens to participate in outdoor recreation activities. The NSRE found that 89 percent of people age 16 and over participated in at least one activity in 1982/83; 94.5 percent in 1994/95; and 97.6 percent in 1999/2000. As a result, the numbers of participants have increased for almost all activities, increasing the demand for outdoor recreation areas and facilities. The NSRE, like the North Carolina Outdoor Recreation Survey, found that traditional outdoor recreation activities continue to be popular.

Obviously, there is little room for the 97.6 percent participation trend to continue to increase. The trend, however, does not suggest any drop in the rate of participation. Future growth in demand is more likely to come from population growth and increased frequency of participation, particularly among the fast-growing over-60 segment of the population. Many of these older citizens, particularly retired ones, have greater time to participate in outdoor recreation activities. They are also often less constrained by lack of money, and general health improvement allows more participation.